Prior to the present invention involving an offset guide wire channel, it was not possible to install small suture anchors over guide wires or positioning mechanisms. There was insufficient room in the anchor body for both a cannulated passageway required for installation purposes as well as the channel and slots needed to attach the suture to the anchor.

An alternate embodiment of a cannulated anchor according to the invention is shown in FIG. 31. A traverse suture passageway 332' of an anchor 310' is positioned offset from the direct intersection with the central longitudinal axis 334' while the longitudinal passageway 350' for the guide wire extends along the central axis. In this manner, the guide wire 352' and suture 330' also do not interfere with one another during installation of the anchor 310' because passageway 332' and 350' do not intersect.

Although particular embodiments of the present invention have been illustrated in the accompanying drawings and described in the foregoing detailed description, it is to be understood that the present invention is not to be limited to just the embodiments disclosed, but that they are capable of numerous rearrangements, modifications and substitutions without departing from the scope of the claims hereafter.

What is claimed is:

1. An anchor for securing a suture to bone, comprising:

an elongated body having a proximal region terminating in a proximal end, and a distal region terminating in a distal end configured for insertion into a hole in the bone;

said proximal region including an element configured for positive axial interengagement with a corresponding element of a driver for insertion of said anchor into the hole, said element of said proximal region including one of a protrusion or a recess which axially interlocks with a corresponding recess or protrusion, respectively, of the corresponding driver element;

at least one ridge, disposed on an exterior surface of said body, for engaging the bone after insertion to resist withdrawal of said anchor; and

a suture mount carried by said elongated body.

2. The anchor of claim 1 wherein said recess includes an opening in said proximal region of said anchor or in said driver.

3. The anchor of claim 1 in which said element of said anchor includes a projection extending from said elongated body for engaging a matching socket of the corresponding driver element.

4. The anchor of claim 1 in which said element of said anchor is narrower in cross-section along a first dimension than along another cross-sectional dimension.

5. The anchor of claim 1 in which said element of said anchor includes a socket defined by said elongated body which has an opening communicating with said proximal end of said body, and said socket is narrower in cross-section along a first dimension than along another cross-sectional dimension.

6. The anchor of claim 5 in which said socket also becomes smaller in width in said first dimension progressing distally to a distal base of said socket.

7. The anchor of claim 1 in which said elongated body further defines a passageway for receiving a guide wire during insertion of said anchor.

8. The anchor of claim 7 in which said suture mount includes a hole in said elongated body, and said passageway does not intersect said hole.

9. The anchor of claim 1 wherein said element of said proximal region of said anchor is configured to provide a snap fit with the corresponding element of the driver.

10. The anchor of claim 9 wherein said element of said proximal region of said anchor is further configured so that the snap fit is sufficiently strong to allow said anchor to be removed from the bone hole after insertion.

11. The anchor of claim 1 wherein said element of said proximal region of said anchor comprises a projection on said elongated body and the element of the driver includes a recess that receives said projection to provide the positive axial interengagement.

12. The anchor of claim 1 wherein said element of said proximal region of said anchor comprises a recess on said elongated body and the element of the driver includes a projection which is received in the recess to provide the positive axial interengagement.

13. An anchor and driver assembly comprising:

an anchor member including an elongated body having a proximal region terminating in a proximal end, and a distal region terminating in a distal end configured for insertion into a hole in a bone;

a driver member having a handle member and a shaft member, said shaft member having a drive element at its distal end;

said proximal region of said anchor member including an element configured for positive axial interengagement with said drive element for insertion of said anchor into the hole by said driver member, said element of said anchor member including one of a protrusion or a recess which axially interlocks with a corresponding recess or protrusion, respectively, of said drive element;

at least one ridge, disposed on an exterior surface of said body, for engaging the bone after insertion to resist withdrawal of said anchor member; and

a suture mount carried by said elongated body.

14. The assembly of claim 13 wherein said driver member has a passageway therethrough, and said anchor member has an opening therein communicable with said passageway and with said suture mount.

15. The assembly of claim 13 further comprising a suture member attached to said anchor member by said suture mount, passing through said opening, and being positioned in said passageway.

16. The anchor of claim 13 in which said anchor member and said driver member each define a passageway alignable with each other to receive a guide wire through both said passageways to assist placement during insertion of said anchor member.

17. The assembly of claim 13 wherein said driver element includes a pin arranged transversely to a longitudinal axis of said shaft member, and said element of said anchor member includes a socket in said elongated body for receiving said pin.

18. The assembly of claim 17 wherein said socket includes a slot having an open proximal end and a closed distal end, said closed distal end being substantially the same size as said pin and said slot being narrower than said pin, thereby to provide the positive axial interengagement with said pin.

add a7 ADD 37 / add C6